

# The Works at Work

## Fresh Pond Parkway Sewer Project



*The Works at Work* is a quarterly publication of the City of Cambridge's Department of Public Works. *The Works at Work* is published by S E A Consultants Inc.

April 2001  
6th Edition

Dear Fresh Pond Community Member:

Public Participation will always be at the top of the agenda throughout the implementation of the Sewer Separation and Storm Water Management Program. The next phase is the CambridgePark Drive Area Drainage project. This involves constructing an outfall pipe from the end of the Fresh Pond Parkway construction to a discharge point located near the Little River. In preparation for this phase, an extensive public outreach program has been in effect to inform the community, surrounding towns, interest groups and stakeholders about the project and to solicit their input. To date, there have been 4 public informational meetings, meetings with the Mystic River Watershed Association and the Coalition for the Alewife, field trips with Friends of the Alewife Reservation, meetings with town officials from Arlington and Belmont, and individually with local businesses and other interested parties. The success of this program depends largely on the support and response of an informed community. This is the goal of the Public Participation Program.

Thank you for your involvement.

Sincerely,

Richard Rossi  
Acting Commissioner

THE  
WORKS  
CAMBRIDGE  
DEPARTMENT  
OF PUBLIC  
WORKS

## Up Next - Phase II

**Vin Spada, P. E.**  
Project Manager

Phase I of the Fresh Pond Parkway (FPP) construction project is almost completed. The next step in the process is planning and design for Phase II, the continuation of the Fresh Pond storm drain to Little River. This work, referred to as the CambridgePark Drive Area Drainage (CPDAD), will extend the new storm water culvert from the intersection of Concord Avenue and Wheeler Street along Wheeler Street to the railroad tracks, then parallel to the tracks to

Fawcett Street, across the tracks to CambridgePark Drive, then ending at a proposed detention basin at Alewife Reservation with a drain outlet to Little River.

The purpose of Phase II is to collect storm water that now contributes to flooding and pipe back ups in the Fresh Pond area and convey it separately to the Little River for discharge. Water quality and hydraulic impacts to the Alewife Brook and Little River have been primary considerations in

the development of the CPDAD design program.

Extensive additional analysis has been performed in response to public comments and concerns received after the first of three public meetings conducted in late 2000. Several important concerns were raised in these public meetings. They included the need for a more detailed evaluation of alternatives to the siting of the proposed storm water detention basin in the Alewife Reservation; the potential for exacerbating downstream flooding along the Alewife Brook; and water quality impacts to the Alewife Brook / Little River system associated with storm water pollutants. Project designs have been modified to address these concerns. Phase II is proposed to start construction in winter of 2001 with a construction duration of approximately 15 months.

The CPDAD project will be undergoing further public review as a component of the Notice of Project Change (NPC) for combined sewer overflow (CSO) control



Box Culvert installation on Concord Avenue

in the Alewife Brook. The NPC is expected to be filed with the Massachusetts Environmental Policy Act Unit (MEPA) in April for public review, comment and MEPA action. ■

# Report From the Field



**Bruno Cardarelli**  
*Chief Resident Engineer*

The City's Fresh Pond contractor, P. Gioioso & Sons, Inc. has been concentrating their work activities in New Street. Work activities include the installation of a new underground pump station, located in the rear of the 3M Company and Tech Auto. The pump station is 90% complete with only the mechanical components of the installation remaining.



*Preparing for New Street Tank Installation*

The new station will replace the existing pump station and provide better storm water management for the surrounding area and reduce flooding on New Street.

Other on-going activities along New Street include: water service replacement, new drain pipes, catch basins, force main, underground storage tank and emergency generator installation. The contractor should complete the pump station related work on New Street by June, 2001.

Construction on Fresh Pond Parkway and Concord Avenue has slowed down during the winter months but will increase in the spring. The work will focus on surface enhancements, including full depth road restoration on Concord Avenue, resurfacing FPP, curb replacing and resetting, new sidewalks, bicycle path, street lighting, pedestrian crossing traffic signals and landscaping. ■



*PG&S crew overseeing excavation on New Street*

## **The Contractor - P. Gioioso & Sons**

P. Gioioso & Sons, Inc. (PG&S), contractor for the Fresh Pond Sewer Separation Project, was founded in 1959. Recognized as one of the region's leading contractors, they are highly rated for their ability to carry out complex construction projects sited in environmentally sensitive areas. Their key focus is an awareness of the impacts that the construction could have on the community and the ability to mitigate these impacts.

Another focus has been the safety of pedestrians and vehicular traffic. "I could say that this is like any other sewer construction project that we've worked on," says Bob Tuminowski, PG&S Superintendent, "except for the

*(continued on page 3)*

## **Never Too Young To Learn . . .**

The Bigelow Cooperative Daycare children came to the Fresh Pond Parkway (FPP) sewer construction site for a field trip.

Earl Ross, Bruno Cardarelli, and David Arthur, the S E A field staff, along with Bob Tuminowski, Superintendent for the contractor, P. Gioioso & Sons, Inc. and Chief Ranger Jean Rogers, watershed ranger at the Fresh Pond Reservation, put their heads together to plan a program that would be both educational and fun for the kids. When the kids arrived at the S E A field office, they found models of construction equipment, maps of Fresh Pond, pictures of animals that live on the reservation and, of course, snacks.

Ranger Jean kicked off the program with a "Show and Tell" about the various animals and birds that live at Fresh Pond. She emphasized the importance of the sewer separation project to maintain the fragile ecosystem of the pond for these inhabitants. Earl spoke to the issue of pollution and the significance that sewer separation plays in preventing the flooding of Fresh Pond and keeping it environmentally healthy. Bruno and David demonstrated the uses of the different construction equipment to build the project.

Following the presentation, the children assembled outside to watch an excavator digging a small trench in the Parkway. With the help of

Bob and his crew, they were able to get a first hand look at a front end loader.

After a verse of "Here come the Girls and Boys with their big yellow toys..." - a construction song written by Earl - the children went back to school.

It's still a matter of debate as to whom enjoyed the morning more - the Bigelow children or the FPP project crew! ■



*Guess the number of kids in the bucket ...*



## PG&S (continued)

traffic. We continually change our traffic plans to allow traffic to flow smoothly and to keep pedestrians safe. It's a challenge that we face every day and, so far, with the help of state and city detail police officers, we've been able to meet this challenge." PG&S is known in the industry for its outstanding safety record and is the recipient of the prestigious industry award for Outstanding Safety Record & Program from the National Utility Contractors Association. The PG&S crew is committed to keeping this record in its work at Fresh Pond. ■

## Spring Awakening Construction Update



As you anticipate the emergence of the flora and fauna in the Fresh Pond Reservation, likewise expect construction activity to burst forth from its near hibernation. The frost in the ground slowed much of the surface enhancement construction work this winter. Now that spring is here and the thaw is well underway, construction activity will resume in full force.

The construction is on schedule to be completed in late summer. There remains much work to do in order to meet this date including several new items added to the construction. In a cooperative effort, the DPW and the Cambridge Water Department have joined together under this contract to construct water distribution system improvements along Fresh Pond, Concord Avenue, and Lake View Avenue. The Community Development Department is also working with the DPW to include new traffic calming and sidewalk improvements along Lexington Avenue, Worthington Street, and Lake View Avenue. The intent of the cooperative effort is to minimize construction disturbances to the residents and commuters in the area.

While all this is going on, travel on the Parkway will be difficult. We will continue to work diligently to complete the work as quickly as possible. ■

## Project Team Highlights

### Profile of James (Jim) Wilcox

*Senior Engineer/Land Surveyor  
Department of Public Works*

Jim Wilcox has been with the DPW for over two years. One of his major responsibilities is developing all the reports required by regulatory agencies such as the MWRA and the Department of Environmental Protection. His involvement with the FPP project includes monitoring flows at the Concord Avenue CSO and preparing compliance reports. Jim also manages the inflow/infiltration (I/I) contract for the DPW. He performs field investigations and research, prepares community notices for building inspections and internal pipe closed circuit TV inspection. (I/I refers to leaky, old sewer pipes with either groundwater or water from sump pumps and/or roof drains getting in the system). "The sewer separation project provides a big benefit to the City espe-



cially when it comes to I/I. It allows us to send less water flow to the MWRA sewage system, which results in substantial cost savings to the City. This is because the City pays for each gallon of water that flows through its system."

Jim is also DPW's GIS (Geographical Information Systems) coordinator. The City recently implemented ArcFM soft-

ware which allows DPW to update all information on the sewer and drainage systems. "Once all the sewer separation and I/I projects are done, we can easily update all our records and plans. This gives DPW a real picture of what is happen-

ing in the field, allowing us to proactively track and schedule maintenance activities and not just react to problems that come up."

One of Jim's favorite tasks is coordinating the DPW's cooperative education program. He enjoys mentoring and interacting with the students. Jim's 15-month old son, Brendan, gives him plenty of practice in this area. ■

### Profile of William (Bill) Pisano

*Vice President, Montgomery Watson*



Dr. Bill Pisano is the Technical Director for the project. Designing a solution to the flooding problems experienced by Fresh Pond holds a special interest for

him beyond the engineering aspects. "I am a local resident who has lived near Fresh Pond for over 30 years. I have jogged and biked around the pond. I know what a fragile resource it is and how problematic the flooding is in this area. For me, as a long time resident, the pond's welfare is a concern."

The flat topography of the area provides the engineering challenge. Large diameter pipes are needed to compensate for lack of pipe slope.

The storm waters move through the pipes at a very slow velocity which allows grit and sediment to settle out of the water and into the pipes. Engineering designs include provisions to periodically remove the sand and debris from the pipe through use of flush vaults.

Innovative technologies are being used to optimize design of the Fresh Pond Parkway sewer system. These include: sanitary and drain flush vaults, deep sump catch basins, floatables controls and flow rate controls.

With a Ph.D. in environmental engineering from Harvard University, and 30 years of engineering experience studying storm water management, Bill brings a special expertise to solving the problems at Fresh Pond. "I find this an exciting opportunity to be able to apply my knowledge to saving a valuable resource for Cambridge and the other surrounding communities." ■



City of Cambridge  
Dept. of Public Works  
147 Hampshire Street  
Cambridge, MA 02139



## Key Contacts . . .

In case of emergencies, questions, problems, requests for project information or meeting announcements, please observe the following procedure.

### **Construction Related Activities:**

Call the **S E A Field Trailer at 617-661-7403**. The telephone at the trailer is staffed from 7:00 AM until 5:00 PM, Monday - Thursday; on Friday, the time is from 7:00 AM until 3:30 PM. Bruno Cardarelli, Chief Resident Engineer, and the S E A Field staff will be available during the week to immediately respond to your calls. **This is the fastest way to get action on construction related concerns.**

After 5:00 PM and on weekends and holidays, the message on the S E A field office phone will direct the caller to the DPW Hot Line at 617-349-4860. DPW employees answer this phone line 24 hours a day.

### **Community Relations Issues:**

Call **Judy Kavanagh**, Community Relations Coordinator, at **617-498-4710** regarding public meetings or project information updates.

### **Fresh Pond Parkway Project Team**

#### **Cambridge**

#### **Department of Public Works**

Richard Rossi, *Acting Commissioner*  
Lisa Peterson, *Acting Deputy Commissioner*  
Owen O'Riordan, *P.E., City Engineer*  
Catherine Daly Woodbury,  
*Engineering Project Coordinator*

#### **Engineering Project Team**

S E A Consultants Inc. (S E A)  
Montgomery Watson (MW)  
TAMS

#### **Contractor**

P. Gioioso & Sons, Inc.